

*Update on  
Intelligent Transportation  
Systems  
in North Carolina  
&  
Upcoming Items of Interest*

*Jo Ann Oerter  
Traffic Engineering Conference  
September 2004*

**www.ncsmartlink.org**  
Your link to NCDOT Traveler Information



# *How does NCDOT do “Intelligent Transportation Systems” ?*

- Planning and Funding by  
Traffic Operations - Traffic Engineering Branch  
Cheryl Evans
- Design and Construction Engineering by  
Traffic Mgmt Systems - Traffic Engineering Branch  
Buddy Murr
- **Operations and Statewide Traveler Information**  
ITS Operations - Operations  
Kelly Damron - Rob Stone - Jo Ann Oerter
- Day to Day ITS Operations and Maintenance  
Highway Divisions

## *ITS Operations Goals*

- To minimize disruptions to traffic (IM)
- To give motorists as much info as possible, in as many ways as possible, to help them make safe and efficient travel decisions (Traveler Info)
- To provide resources to respond to emergency travel situations (hurricanes, snow and ice, etc.) (Emergency Prep)

# *Transportation Management Centers*

Charlotte

Raleigh - Durham



Greensboro ↔ Winston-Salem

Merging in Fall 2004

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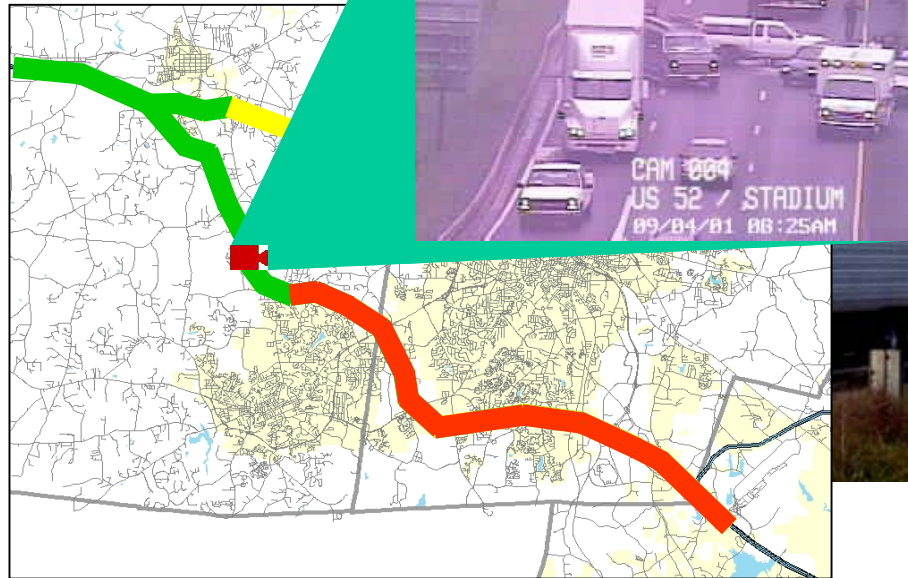
## *Closed Circuit TV (CCTV)*



- 250+ Statewide
- Bringing images back to Raleigh for Emergency Info Center, Statewide Operations Center & [www.ncsmartlink.org](http://www.ncsmartlink.org)

## *Detection*

- Senses speed and volumes of traffic
- Can use for Travel Time and Congestion Maps



- Currently only on I-77 in Charlotte area
- Coming to other urban areas over time

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## *Dynamic Message Signs*



- 115 Statewide Signs
- 4 Amber Alerts in 3 weeks
- Revised DMS Policy will be issued this fall



## *Highway Advisory Radios*



30 Statewide

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# Kiosks

- Joint venture by NCDOT and NC Department of Commerce - Travel & Tourism Division

- **Locations**

- All Welcome Centers
- 2 Rest Areas  
(Alamance Co = Test)
- 1 Visitor Center



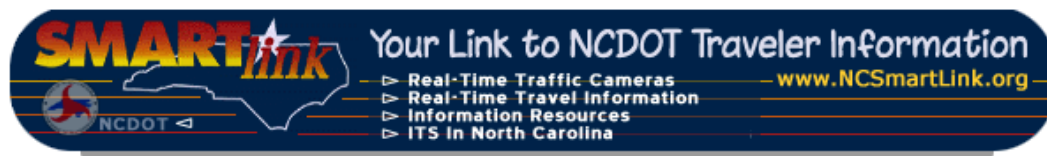
- **Content**

- Traffic Info
- Travel & Tourism Info

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## The OLD [www.ncsmartlink.org](http://www.ncsmartlink.org)



**Coming Soon: High Occupancy Vehicle (HOV) Lanes**

### Traffic Cameras



This is your link to a network of traffic cameras in the state of North Carolina.

### Real Time Travel Info (TIMS)



Current information on events that cause severe and unusual congestion on major roadways in North Carolina, including accidents, work zones and adverse weather conditions.

### ITS In North Carolina



In an effort to improve transportation safety and efficiency, NCDOT is looking toward a broad range of diverse technologies known as Intelligent Transportation Systems.

### NC Travel Information Phone Number



To efficiently provide travel information to the public, NCDOT is in the process of developing a three-digit travel information phone number for traffic, transit, and other information.

### ITS Strategic Deployment Plan



The Department of Transportation's vision for ITS in North Carolina.

- [ITS Device Request Form](#)
- [Strategic Deployment Regional Reports](#)

### Information Resources





Links to various transit sites throughout the state.

For questions or comments about this site, please contact:  
[NCSmartlink](http://www.ncsmartlink.org)




**[www.ncsmartlink.org](http://www.ncsmartlink.org)**  
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# The NEW [www.ncsmartlink.org](http://www.ncsmartlink.org)

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[Traffic Cameras](#) | [TIMS](#) | [511](#) | [Traffic Incident Management](#) | [ITS Strategic Deployment](#) | [ITS Education](#) | [Related Links](#)

**» LIVE CAMERAS**  
**NC Smartlink Maps**

- ☐ Metrolina Region
  - ☐ Metrolina
  - ☐ Metrolina North
  - ☐ Metrolina South
- ☐ Triad Region
  - ☐ Greensboro
  - ☐ Winston-Salem
- ☐ Triangle Region
  - ☐ Triangle
  - ☐ Durham / I-40
  - ☐ I-40 / RTP
  - ☐ Raleigh



**Additional Cameras**

- ☐ Municipal Sites
  - ☐ Hickory
  - ☐ High Point
  - ☐ Salisbury
  - ☐ Winston-Salem

**HOME » TRAFFIC CAMERAS**  


**NC Smartlink - Your Link to NCDOT Traveler Information**

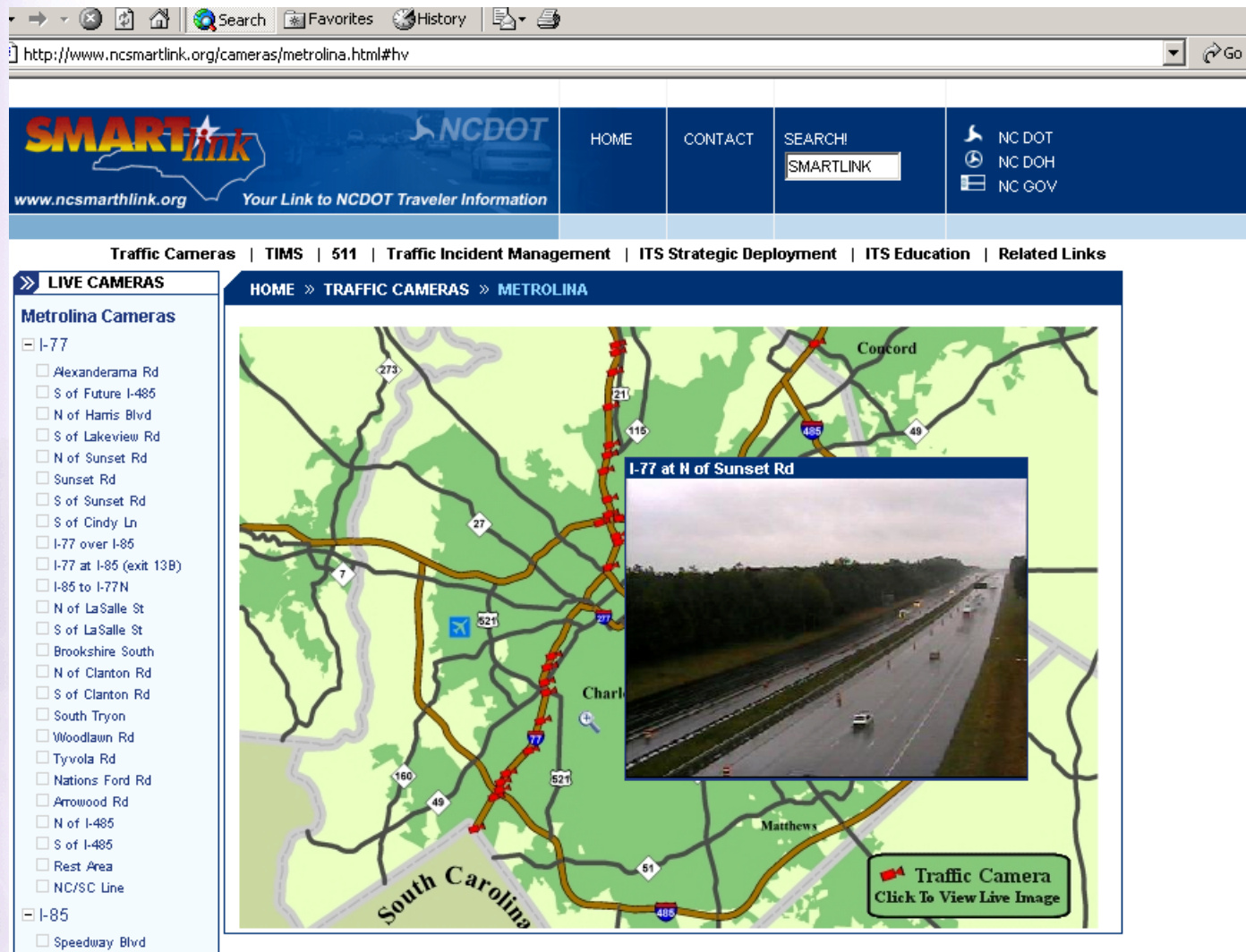
Use the navigation links to the left or click on the map above for live real-time traffic camera images.

 North Carolina 511  
[Statewide Travel Information](#) The North Carolina  
Department of Transportation

**[www.ncsmartlink.org](http://www.ncsmartlink.org)**  
Your link to NCDOT Traveler Information



# Traffic Cameras on [www.ncsmartlink.org](http://www.ncsmartlink.org)



The screenshot shows a web browser window with the address <http://www.ncsmartlink.org/cameras/metrolina.html#hv>. The website features a blue header with the SMARTlink logo, NCDOT logo, and navigation links: HOME, CONTACT, and a SEARCH! box containing the text SMARTLINK. Below the header is a navigation bar with links: Traffic Cameras, TIMS, 511, Traffic Incident Management, ITS Strategic Deployment, ITS Education, and Related Links.

The main content area is titled "LIVE CAMERAS" and "Metrolina Cameras". It lists various camera locations with checkboxes:


- ☐ I-77
  - ☐ Alexanderama Rd
  - ☐ S of Future I-485
  - ☐ N of Harris Blvd
  - ☐ S of Lakeview Rd
  - ☐ N of Sunset Rd
  - ☐ Sunset Rd
  - ☐ S of Sunset Rd
  - ☐ S of Cindy Ln
  - ☐ I-77 over I-85
  - ☐ I-77 at I-85 (exit 13B)
  - ☐ I-85 to I-77N
  - ☐ N of LaSalle St
  - ☐ S of LaSalle St
  - ☐ Brookshire South
  - ☐ N of Clanton Rd
  - ☐ S of Clanton Rd
  - ☐ South Tryon
  - ☐ Woodlawn Rd
  - ☐ Tyrvola Rd
  - ☐ Nations Ford Rd
  - ☐ Arrowood Rd
  - ☐ N of I-485
  - ☐ S of I-485
  - ☐ Rest Area
  - ☐ NC/SC Line
- ☐ I-85
  - ☐ Speedway Blvd

On the right, a map shows the Metrolina area with a red camera icon at the intersection of I-77 and N of Sunset Rd. A live video feed of this location is displayed in a window titled "I-77 at N of Sunset Rd". A legend indicates that a red camera icon means "Click To View Live Image".

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## Traveler Information Management System (TIMS)



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
Traveler Information Management System

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>> Other Info
 

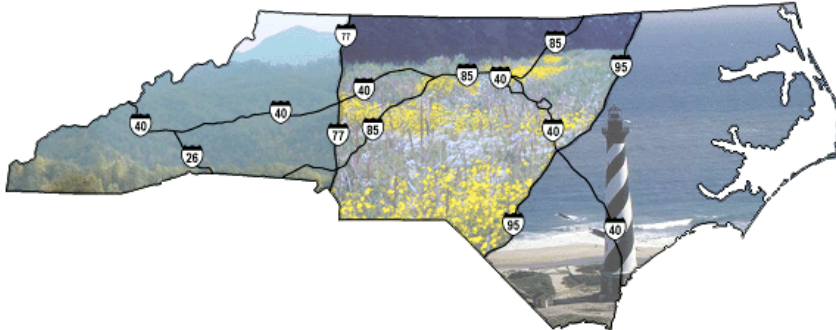
- Ferry Info
- Train Info
- Travel Info for Other States
- Construction Projects

### Traveler Information Management System

#### Welcome to NCDOT's Traveler Information Management System. (TIMS)

Get real time information on events that cause severe and unusual congestion on NCDOT maintained roadways in North Carolina by clicking a region on the map, by choosing a county, or by choosing a road below.

Select by Region: 
 Route: 
 County:




Download all Active Incidents into Excel

**www.ncsmartlink.org**  
Your link to NCDOT Traveler Information



# Traveler Information Management System (TIMS)


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### Incidents for I-77

Select by Region: 
 Route: 
 County:


[Incidents] [Adverse Weather]

**The following incidents were found on I-77**


Description	Road	County	Location
Congestion	I-77	Mecklenburg	Charlotte / Mile Marker 11 to 13 Heading North
Construction	I-77	Mecklenburg	Mile Marker 18 Both Directions
Construction	I-77	Iredell	Mile Marker 54 Both Directions

**Adverse Weather Listing**  
(I-77 spans the following counties.)




County	Interstates	US/NC Routes	Secondary Roads
Iredell	Not Reporting	Not Reporting	Not Reporting
Mecklenburg	Not Reporting	Not Reporting	Not Reporting
Surry	Not Reporting	Not Reporting	Not Reporting
Yadkin	Not Reporting	Not Reporting	Not Reporting


 The North Carolina  
 Department of Transportation  
 4/23/2004 5:07:19 PM

## Traveler Information Management System (TIMS)


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### Incident Detail



**Location**  
 Haywood County  
 I-40 (Mile Marker 15) Both Directions  
 Pigeon River Gorge  
 2 of 4 lanes closed.  
 Expected backup is more than 2 miles

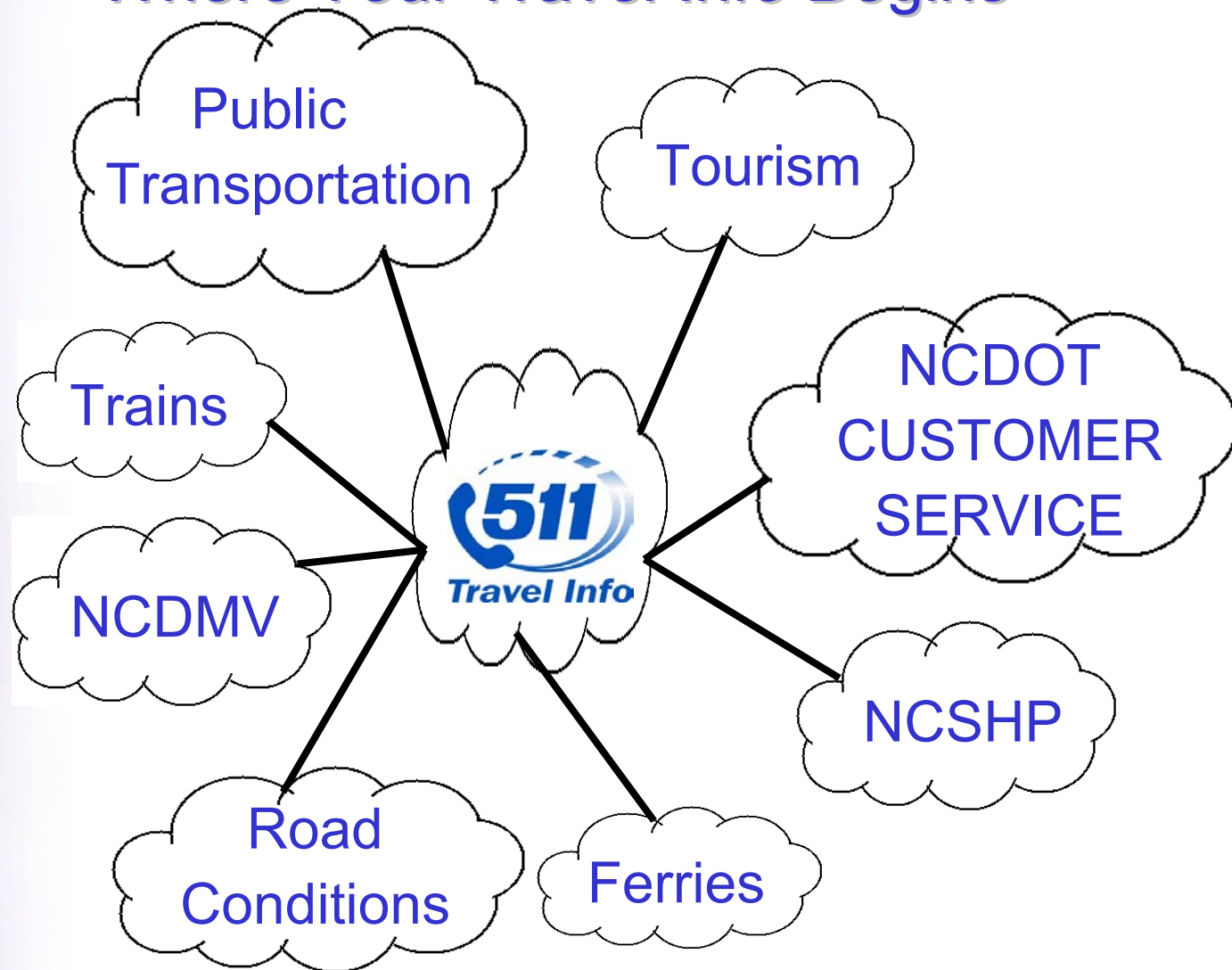
**Start Time**  
 10/20/2003 08:00 AM  
  
**End Time**  
 9/30/2004 05:00 PM

**Reason**  
**Construction**  
 Replacement of median barrier wall and pavement upgrades will close one lane in each direction. Slow traffic is expected approximately 2 miles east of MM 20 and 2 miles west of MM 15 due to the lane closures. ON FRIDAY, APRIL 23, 2004 A TRAFFIC SHIFT WILL TAKE PLACE IN THE EASTBOUND LANES SHIFTING ALL TRAFFIC TO THE INSIDE LANE. ON MONDAY, APRIL 26, 2004 @ 8:00 AM MILLING AND PAVING OPERATIONS ARE SCHEDULED TO BEGIN ON THE EASTBOUND OUTSIDE LANE. LONGER THAN NORMAL TRAFFIC DELAYS SHOULD BE EXPECTED.


 The North Carolina  
 Department of Transportation  
 4/23/2004 5:08:56 PM



# North Carolina's 511 Program "Where Your Travel Info Begins"

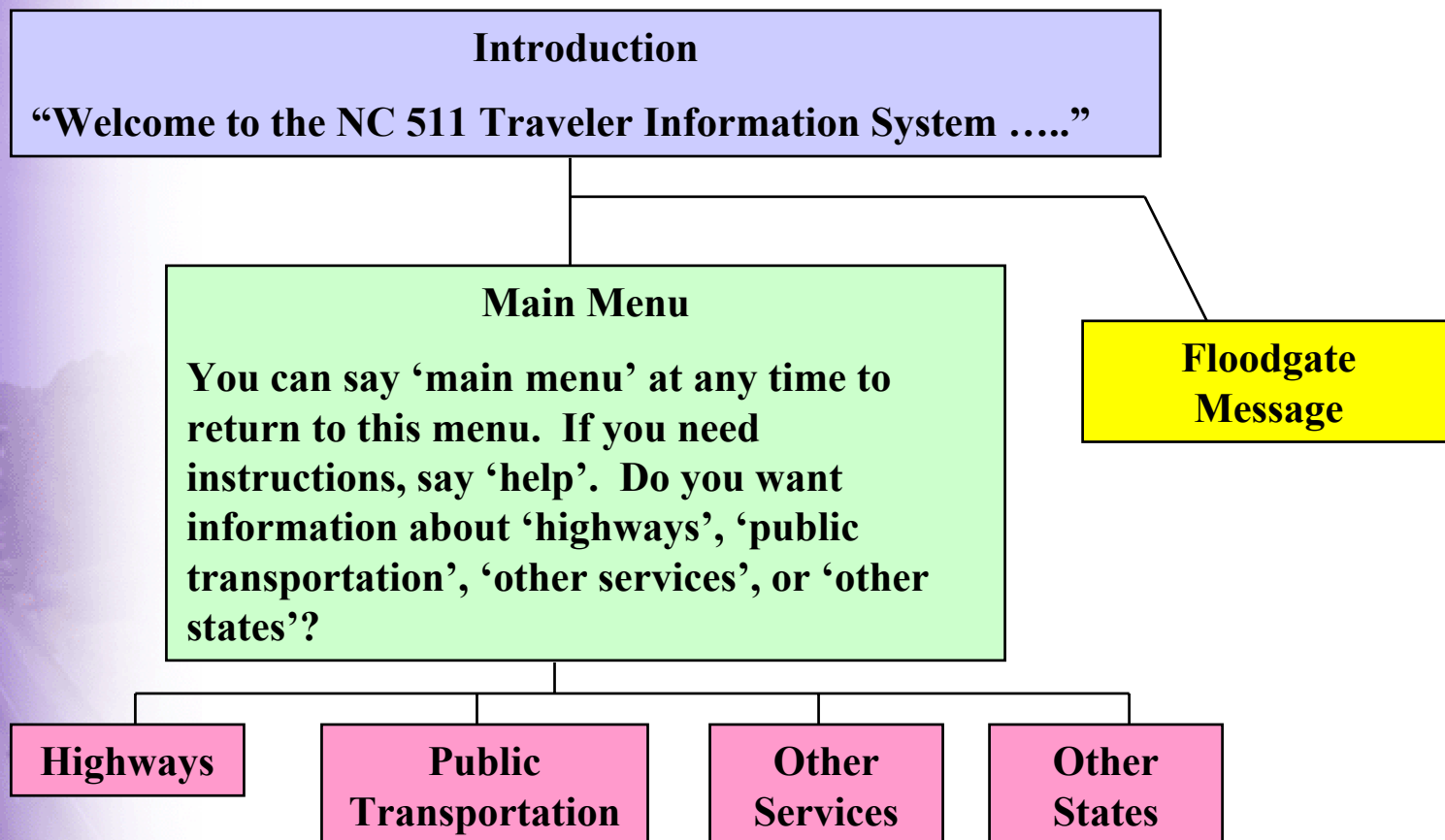


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# 511 Menu Tree



[www.ncsmartlink.org](http://www.ncsmartlink.org)

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*All of these Traveler Info elements  
work together within a Division.*

*The ITS Operations Unit  
coordinates and disseminates info  
on regional or statewide basis, as  
needed.*

## *Regional Incident Coordination*

When?

- “High Severity” incident entered into TIMS (> 2 mile back-up)
- Freeway
- Duration
  - All lanes in one direction closed for 2 or more hours
  - One or more lanes closed for 4 or more hours



## *Regional Incident Coordination*

What?

ITS Operations facilitates coordination among...

- DOT Public Information = Press Release
- NC Trucking Association = Phone Call
- TIMS Special Alert = 511 Floodgate Msg
- Other Divisions = DMS Messages
- Other States = DOT's + NC Welcome Centers
- I-95 Corridor Coalition = Maine - Florida
- Arterials w/Closed Loop Signal Systems =

Coordination for Detours

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## *Traffic Signal Coordination*



Hard to make connection between maintenance person who enters overturned fuel tanker into TIMS and people that run signal systems...  
-especially if municipal system  
-especially if at 4 AM



Will be working on improving this coordination this fall

## *Upcoming Items*

- Statewide Transportation Operations Center
  - 24 x 7 x 365 Operations
  - Regional + statewide incident coordination
  - TIMS Assistance
  - Weather, Homeland Security & Amber Alerts
  - Back-Up DMS and HAR Control
  - Back-Up DOT coordination point for law enforcement, Emergency Mgmt, etc.

Goal: Operational January 2005

## *Upcoming Item*

### Signal & ITS Device Inventory

- Working on Fall '04
- “Son of SIMTS”
- Adding ITS to signals inventory
- Debating level of inventory - LED vs. controller
- Linking with Maintenance Mgmt System (MMS) to be able to tie to cost data from SAP
- Will ask for field input
  - working group
  - draft version reviews





# *Intelligent Transportation Systems in North Carolina*

## Questions?

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